

## **Abstract**

A method of effectively designing an interactive system is disclosed. The method may preferably include the steps of (1) determining the overall scope of the desired interactive system, including available sources of input and output; (2) creating a list of desired features for the system; (3) creating a rough outline of perceptions, decisions, and actions that the system must be capable of if it is to possess the desired features; (4) designing perception features that implement the identified perception specifications and decision features that implement the decision-making process required by the identified decision specifications; (5) creating any necessary supporting components (e.g., buffers for storing data collected by perception features) to implement the perception and decision features; and (6) creating a behavior feature hierarchy that includes the action features required to implement action features of the interactive system. Each perception feature and decision feature is preferably assigned a priority level which may be a function of several factors. The present method may find particular application in designing an interactive system that implements an anytime algorithm and in designing an interactive system that implements a distributed, asynchronous architecture.

15